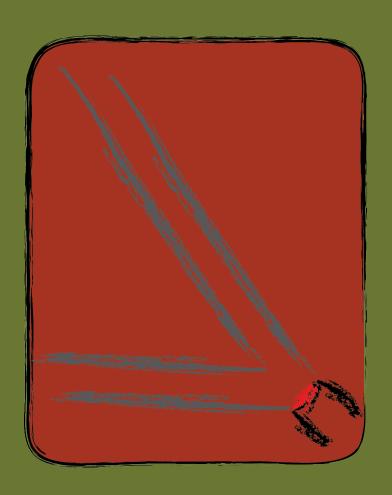
2014

# SEAT BELT AND MOTORCYCLE HELMET SURVEY





Prepared For: Mississippi Governor's Office of Highway Safety Division of Public Safety Planning Mississippi Department of Public Safety Prepared by:

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MISSISSIPPI STATE



# CONTENTS

Introduction4	
Seat Belt Survey Methodology6	
Section One	
Section Two	
Section Three24 Belt use before and after intervention	
Section Four	
Section Five	
Summary38	



# INTRODUCTION

The National Highway Traffic Safety
Administration (NHTSA) estimates there were
32,850 motor vehicle traffic fatalities in the
United States in 2012. This estimate represents
a 2.1 percent decrease from the previous year's
fatality count of 33,561. This staggering estimate
is a constant reminder that fatal crashes have
claimed many lives over the years and continue
to claim on average about 90 lives each and
every day in the United States. In terms of a
rate estimate, NHTSA calculates a national rate
of 1.11fatalities per 100 million vehicle miles of
travel in 2013.

Vehicle safety is a major component in all aspects of vehicle and road designs. However, it is the behavior of the driver and passengers with respect to belt use that ultimately determines the probability of survival in most vehicle crashes. A great number of fatalities may have been avoided if proper vehicle restraints had been used at the time of the crashes. NHTSA estimates the use of seat belts by passenger vehicle occupants age 5 and older saved 12,174 lives in 2012 alone.

NHTSA reports Mississippi's 2012 traffic fatality rate at 19.50 fatalities per 100,000 population. Mississippi's rate was almost twice the national average of 10.69. This disturbing fatality rate continues to be realized by the 582 lives lost in Mississippi in 2012. Although significant increases have been observed in seat belt usage since the primary law was passed, the loss of life due to automobile crashes in Mississippi is still staggering. Perhaps one contributing factor for this loss of life in Mississippi could be attributed to the state continuing to lag behind several

other states in occupant protection practices and likewise, the belt use national average. Mississippi had an estimated 74.4% seat belt usage rate in 2013. The national average was 87%. In 2013, only 3 states had a lower belt usage rate than Mississippi – Montana at 74.0%, New Hampshire at 73.0% and South Dakota at 68.7%. Over the past several years Mississippi has climbed from near the bottom of the rankings to a much more positive seat belt usage rate very close to the national average and back down close to the bottom again. It should also be noted that of all the states with a primary seat belt law Mississippi ranks last in observed belt use.



NHTSA Traffic Safety Facts - Early Estimate of Motor Vehicle Traffic Fatalities in 2013; May 2014 (DOT HS 812 024)

NHTSA Traffic Safety Facts – Occupant Protection; March 2014 (DOT HS 811 892)

NHTSA State Traffic Facts Mississippi (http://www-nrd.nhtsa.dot.gov)

NHTSA Traffic Safety Facts - Seat Belt Use in 2013 - Use Rates in the States and Territories - May 2014 (DOT HS 812 030)

# In 2012, Mississippi's traffic fatality rate was 19.5 FATALITIES PER 100,000 MISSISSIPPIANS.

Mississippi's rate was nearly twice the national average of 10.69.

For the past twelve years Mississippi has participated in a major effort conducted under the term "Click It or Ticket" (CIOT) during Memorial Day mobilizations. These efforts have been an attempt to increase seat belt awareness and use by implementing a number of phases. In 2014, the first of these phases was an earned media phase including public service announcements, brochures, and newspaper articles that were introduced to the Mississippi public. After two weeks of earned media, an extensive paid media campaign began (second phase). Lastly, a statewide law enforcement blitz (third phase) increased the intensity of seatbelt law enforcement throughout the state. All law enforcement agencies participated in this increased level of enforcement by using road blocks as well as saturated patrolling efforts.

In 2014, two observational seat belt surveys were conducted by the Social Science Research Center at Mississippi State University. One survey was conducted prior to media and law enforcement intervention. This pre-campaign survey was a subsample of the recently NHTSA-approved survey design that contains the official sample for the 2014 post-campaign survey cycle. This pre-CIOT survey consisted of 54 sites in 8 counties. The follow-up or post-campaign survey in 2014 utilized the full 173 site, 16 county survey sample. This is the second year the newly approved sample was utilized to provide the official, statewide seat belt estimate for Mississippi.









# SEAT BELT SURVEY METHODOLOGY

The seat belt and motorcycle survey for Mississippi uses a multi-stage area probability approach. In the first stage, an appropriate number of sampling units are randomly selected. The primary sampling unit for the Mississippi survey is the county. The counties with the least amount of crash-related occupant fatalities, approximately the bottom 15%, are excluded from the sampling process. The survey was conducted in 16 Mississippi Counties which comprised 35% of the State's crash-related occupant fatalities between 2005 and 2009.

Special thanks to Preusser Research Group (PRG) for their assistance in the development of this methodology and continuing technical expertise.



Further details on the sampling methodology of the survey can be found in the document "PROPOSAL FOR MISSISSIPPI OBSERVATIONAL SURVEYS OF SAFETY BELT ANDMOTORCYCLE HELMET USE" prepared by William A. Leaf (PRG), David. R. Parrish (SSRC), and Mark G. Soloman (PRG). This methodology was approved by NHTSA in 2011 and can be obtained from the Social Science Research Center at Mississippi State University, Box 5287 Mississippi State, MS 39762, or by contacting Mr. David Parrish at (662) 325-8116 or david.parrish@ssrc.msstate.edu.

### SUMMARY OF SAMPLING METHODOLOGY

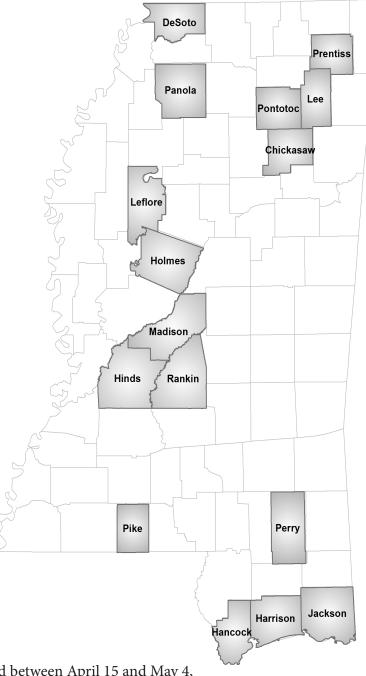
- A. Five counties were selected as certainty counties because of having crash-related occupant fatalities (and likewise population) much larger than other Mississippi Counties. These counties also comprise nearly 21 percent of the state's crash-related occupant fatalities. The certainty counties were DeSoto, Harrison, Hinds, Jackson, and Rankin.
- B. Twenty-nine counties, whose combined crash-related occupant fatalities accounted for about 15% of the state's population, were eliminated from the sampling frame.
- C. Sampling was done without replacement. In addition to the five certainty counties, 11 other counties were chosen, thus the sample consists of 16 counties.
- D. The sample includes 173 forty-five minute observation periods at 173 pseudo-randomly chosen road segment locations. Each road segment within a county was randomly chosen with probability of being chosen proportionate to the DVMT of the road segment. The five certainty counties were allotted 15 observation periods, while the remaining 11 counties were allotted either 10 or 8 observation periods each.
- E. The qualifying route segments comprising the sampling population are identified from the Mississippi Department of Transportation (MDOT) Roadway Characteristics File.
- F. The route segments from each of the survey counties are stratified into the following 5 groupings using MDOT functional classification data: (1) Interstates and Other Expressways, (2) Other Principal Arterials, (3) Minor Arterials and (4) Collectors (5) Local Roads
- G. For a given county, segments were pseudo-randomly chosen from each of the five strata.
- H. For each certainty county, the 15 sites were grouped by proximity into two clusters of 7 and 8 sites.
- I. For each of the other 11 counties, clusters of 5 or 8 were selected depending on the presence or requirement to survey all road classifications (A minimum of 2 road segments per road classification was satisfied.)
- J. For each cluster a day of the week was randomly chosen. All days of the week were eligible for selection.
- K. Once a site was assigned a day of the week, observation times between 7:00 a.m. and 6:00 p.m. were randomly chosen in 1 hour and 15 minute increments.
- L. Direction of observation was randomly assigned for all 173 sites.
- M. Observers were instructed to observe from a site using the assigned direction for a period of 45 minutes.
- N. The sampling frame includes counting all passenger vehicles, sports utility vehicles, vans and pickup trucks. Other vehicles, such as large buses, larger trucks and farm equipment are excluded from observation.
- O. One observer is used at each observation site and the shoulder belt use/nonuse of all front seat, outboard occupants of qualifying vehicles is recorded on forms supplied by the SSRC

# SECTION ONE: PRE-CAMPAIGN OBSERVATIONAL SEAT BELT SURVEY RESULTS

Prior to any media or law enforcement efforts encouraging seat belt usage, a 2014 baseline or "mini" survey was conducted. This survey was administered with intentions of establishing a seat belt usage rate before the CIOT campaign. Observations from 54 sites in 8 counties made up the baseline survey. The 54-site sample was a subsample of the larger statewide survey, which is detailed in Section Two of this report.

### FIGURE 1: PRE-CIOT SITES SURVEYED

DESOTO 8
HARRISON 7
LEE 5
LEFLORE 8
MADISON 5
PERRY 8
PIKE 5
RANKIN 8



The data from this baseline survey was collected between April 15 and May 4, 2014. The counties in the "mini" survey were hand-picked from the statewide sample with the intention of including a mixture of different geographical regions where both rural and urban counties are represented. The 2014 mini survey sample is identical to the pre-campaign sample in 2013.

# TABLE 1: BASELINE SEAT BELT USAGE RATES BY TYPE OF VEHICLE BASELINE SURVEY OF 54 SITES IN 8 COUNTIES

Table 1 shows the baseline belt use figures for driver and outside front seat passenger by type of vehicle observed. The overall usage rate for the baseline survey was 83.2%. Sports Utility Vehicle occupants topped the percent belted ranks with an estimated belt use rate

TYPE OF VEHICLE	OCCUPANTS OBSERVED	PERCENT BELTED
Passenger Car	2,243	85.7%
Pickup Truck	1,471	75.0%
SUV	1,266	88.1%
Van	354	84.2%
TOTAL	5,334	83.2%

of 88.1%. Passenger car and van occupants exhibited higher than average belt rates at 85.7% and 84.2% respectively. Pickup truck occupants continue to exhibit the lowest belt use rates in Mississippi at 75.0%. Seat belt compliance for pickup truck occupants is a considerable problem area for Mississippi, which if addressed could result in a much higher total Mississippi belt use rate.

# TABLE 2: BASELINE SEAT BELT USAGE RATES BY COUNTY BASELINE SURVEY OF 54 SITES IN 8 COUNTIES

A breakdown of seat belt usage rates by county in the pre-CIOT survey (Table 2) illustrates five of the eight counties surveyed above 80% belt use, with Harrison being the top-ranked at 97.8% estimated belt use. Leflore County showed the lowest estimated belt use rate in the mini survey at 60.9%.

The 2014 baseline survey produced an overall estimated seat belt rate that is basically identical to the 2013 baseline overall finding of 82.8%.

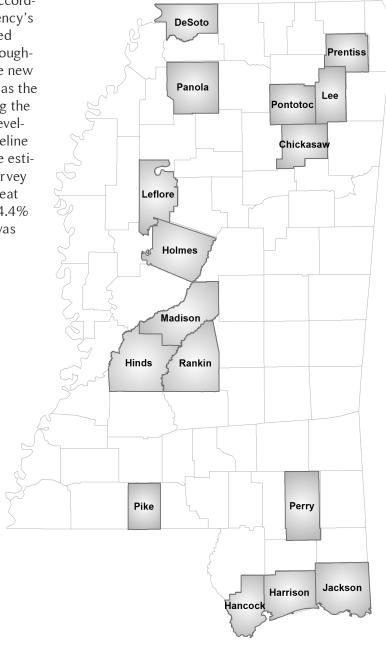
COUNTY	OCCUPANTS OBSERVED	PERCENT BELTED
DeSoto	796	90.8%
Harrison	1,005	97.8%
Lee	524	72.7%
Leflore	672	60.9%
Madison	625	85.8%
Perry	581	85.4%
Pike	470	83.0%
Rankin	661	78.7%
TOTAL	5,334	83.2%

# SECTION TWO:

# POST-CAMPAIGN OBSERVATIONAL SEAT BELT RESULTS

In 2013 NHTSA mandated each state to perform their statewide observational seat belt usage surveys according to the new criteria set forth by the federal agency's final rule in 2011. The new uniform criteria gained intense criticism from surveying professionals throughout the country, but the integrity and intent of the new criteria was defended and proclaimed by NHTSA as the new "yardstick" for all states to adhere. Following the guidelines, a new, compliant survey design was developed by Mississippi and tested in 2012 as the baseline survey (pre-CIOT). It produced an overall baseline estimate in 2012 of 74.3% belt use. The approved survey design was also used as the official estimator of seat belt usage for the state in 2013. It resulted in a 74.4% estimated statewide belt use. This same design was implemented for the statewide survey in 2014.

### FIGURE 2: **POST-CIOT** SITES SURVEYED DESOTO 10 **HARRISON** HINDS **JACKSON** 10 **MADISON** 10 PANOLA 10 PERRY PIKE 10 PONTOTOC RANKIN



The 2014 post-campaign survey was conducted after an intense seat belt media and enforcement campaign known as "Click It or Ticket" during the month of May, 2014. The intentions of this survey are to quantitatively gauge how effective the campaign was received by the motoring public and to generate an official 2014 estimate of seat belt usage for the state. Figure 2 shows the counties that frame the 2014 seat belt survey. There were 173 road segments observed in 16 counties.

The overall result for the 2014 Mississippi Seat Belt Survey is an estimated 78.3% occupant seat belt usage rate with a standard error of 1.288%. The lower limit of the 95% confidence interval is 75.75% and the upper limit is 80.80%. There were 17,206 vehicle occupants observed.

# TABLE 3: SEAT BELT USAGE RATES BY ROAD CLASS FULL SURVEY OF 173 SITES IN 16 COUNTIES

As confirmed by many previous surveys, there is still a clearly defined trend of higher seat belt usage rates on higher traffic count roads. Table 3 shows "interstates and other expressways" leading the road class categories with an 85.9% belt usage rate in 2014. The next level of road category, "other principal arterials," followed with virtually the same rate at 85.2%. The

ROAD CLASS	OCCUPANTS OBSERVED	BELT USAGE RATE
Interstates & Other Expressways	4,320	85.9%
Other Principal Arterials	5,359	85.2%
Minor Arterials	4,357	80.6%
Collectors	2,171	74.8%
Local Roads	999	69.5%

<sup>&</sup>quot;minor arterials" classification of roads also breached the 80% usage rate in 2014. "Collectors" and "local roads" fell below 75% mark at 74.8% and 69.5% respectively. Clearly, local roads remain to be a problem area for belt use compliance in Mississippi.

# TABLE 4: SEAT BELT USAGE RATES BY VEHICLE TYPE FULL SURVEY OF 173 SITES IN 16 COUNTIES

Table 4 illustrates the breakdown of belt usage rates in four vehicle categories. Passenger cars and SUVs showed essentially identical belt use estimates at 81.7% and 81.8% respectively, while vans occupants recorded the highest rate of belt usage at 85.4%. The survey also revealed that only about 7 out of every 10 (71.7%) occupants in pickup trucks were using belts. This low estimate is somewhat expected as pickup trucks have historically been the vehicle of choice to the group that wears their seat belts the least.

The following series of tables (Tables 5-10) provides breakdowns of seat belt use rates by

VEHICLE	OCCUPANTS OBSERVED	BELT USAGE RATE
Passenger Car/Wagon	7,386	81.7%
Pickup	4,688	71.7%
SUV	3,978	81.8%
Van	1,154	85.4%

type of vehicle, by county, by driver/passenger, and by gender. Unsure observations are omitted in these breakdowns, and the extent of this data narrowing produces more specific results but is of practical use only if the number of observations is significant enough to draw conclusions. Usually the minimum number of total observations per category should be around 30 before conclusions can be drawn. Many of the figures in this series of tables may not meet this requirement. However, this indepth breakdown can be used as a loose guide to potential specific problem areas that may deserve attention.

### TABLE 5: SEAT BELT USAGE RATES BY COUNTY - ALL VEHICLES

FULL SURVEY OF 173 SITES IN 16 COUNTIES

ALL TYPES OF VEHICLES BY DRIVER/PASSENGER AND GENDER (N 317,195)

COLUNITY		DRIVERS			SSENGE	RS	OCCUPANTS
COUNTY	Male	Female	All	Male	Female	All	All
DeSoto	84.4%	92.2%	87.1%	77.4%	87.9%	83.9%	86.5%
n =	1216	723	1939	179	293	472	2411
Harrison	88.3%	91.2%	89.6%	91.4%	96.2%	93.3%	90.3%
n =	872	650	1522	176	239	415	1937
Hinds	66.2%	79.1%	71.1%	72.3%	93.8%	79.3%	71.9%
n =	579	461	1040	100	93	193	1233
Jackson	79.7%	90.5%	84.2%	78.0%	92.9%	87.7%	85.2%
n =	745	484	1229	188	265	383	1612
Rankin	76.9%	84.6%	79.4%	63.3%	73.9%	67.9%	78.7%
n =	501	410	911	92	137	229	1140
Chickasaw	63.1%	76.3%	67.6%	53.3%	78.0%	73.0%	68.4%
n =	402	252	654	54	78	153	786
Hancock	83.3%	83.2%	84.3%	71.0%	95.5%	73.0%	83.2%
n =	363	216	579	63	90	132	732
Holmes	71.2%	82.9%	75.1%	64.7%	86.1%	70.1%	74.5%
n =	446	184	630	77	102	179	809
Lee	66.8%	74.4%	69.8%	72.1%	75.4%	73.3%	70.3%
n =	468	322	790	67	84	151	941
Leflore	62.6%	70.7%	67.4%	60.4%	84.6%	66.4%	67.4%
n =	300	276	576	32	24	56	632
Madison	81.6%	85.1%	84.1%	92.5%	94.3%	93.8%	86.0%
n =	387	307	694	59	117	176	870
Panola	78.1%	76.1%	77.6%	71.4%	85.2%	79.6%	77.9%
n =	705	448	1153	132	234	366	1519
Perry	81.9%	90.5%	85.3%	88.1%	80.9%	76.9%	85.2%
n =	292	192	484	37	86	123	607
Pike	80.3%	90.6%	83.8%	81.9%	93.1%	88.2%	84.0%
n =	366	192	678	47	103	150	828
Pontotoc	71.2%	82.7%	75.2%	67.4%	85.1%	76.0%	75.5%
n =	345	225	570	51	54	105	675
Prentiss	66.6%	82.6%	70.6%	47.5%	90.3%	75.4%	71.7%
n =	228	163	391	29	43	72	463
TOTAL	74.9%	83.0%	78.0%	72.1%	87.3%	78.6%	78.3%
N 3	8,215	5,625	13,840	1,313	2,042	3,355	17,195

### **ENCOURAGING OBSERVATIONS:**

- •Harrison County is the only county to surpass the 90% mark for overall observed belt use.
- •DeSoto, Jackson, Madison and Perry had overall belt use at or slightly above 85%
- of the time.

- •Two counties (Chickasaw and Leflore) illustrated disappointing overall belt use estimates below 70 percent.
- •Male drivers in Chickasaw and Leflore were buckled in the low 60% range
- •Seven counties show female passengers buckling up over 90% •Male passengers in Chickasaw, Holmes, Leflore, Prentiss and Rankin were all buckled below 65% of the time.

# TABLE 6: SEAT BELT USAGE RATES BY COUNTY – CARSISUVSIVANS FULL SURVEY OF 173 SITES IN 16 COUNTIES CARS 1 SUVS 1 VANS BY DRIVER/PASSENGER AND GENDER (N312,509)

COLINITY		DRIVERS		Pas	SSENGE	RS	OCCUPANTS
COUNTY	Male	Female	All	Male	Female	All	All
DeSoto	87.0%	92.4%	89.4%	85.2%	86.8%	85.3%	88.3%
n =	780	681	1,461	113	256	369	1,830
Harrison	91.0%	91.1%	91.2%	93.6%	95.9%	94.9%	92.0%
n =	515	600	1,115	108	200	308	1,423
Hinds	70.4%	79.8%	75.1%	80.4%	94.0%	89.1%	76.0%
n =	353	437	790	62	77	139	929
Jackson	83.8%	91.9%	88.1%	75.7%	96.6%	91.4%	88.8%
n =	425	441	866	79	199	278	1,144
Rankin	76.9%	84.7%	81.8%	56.2%	73.7%	66.7%	80.4%
n =	307	393	700	77	106	183	883
Chickasaw	67.6%	77.4%	72.9%	60.0%	81.0%	78.1%	73.4%
n =	199	241	440	28	62	90	530
Hancock	80.1%	83.2%	84.9%	70.8%	95.4%	73.4%	83.5%
n =	228	184	412	45	66	111	523
Holmes	68.9%	82.9%	76.4%	62.6%	86.6%	73.5%	75.8%
n =	259	179	438	49	90	139	577
Lee	70.1%	74.2%	70.9%	76.9%	78.1%	77.5%	71.6%
n =	240	308	548	36	64	100	648
Leflore	58.8%	70.8%	67.0%	49.9%	83.3%	76.4%	67.2%
n =	128	263	391	14	19	33	424
Madison	88.2%	86.3%	87.9%	94.3%	92.2%	93.9%	89.4%
n =	238	297	535	40	100	140	675
Panola	80.9%	76.9%	78.8%	78.4%	87.4%	83.9%	79.8%
n =	426	423	849	80	197	277	1,126
Perry	92.2%	91.9%	91.6%	100.0%	97.2%	98.3%	92.3%
n =	140	176	316	17	71	88	404
Pike	82.5%	90.2%	87.2%	91.4%	94.6%	91.8%	87.8%
n =	198	288	486	30	86	116	602
Pontotoc	75.5%	83.1%	79.9%	78.7%	87.3%	86.0%	80.5%
n =	173	209	382	26	42	68	450
Prentiss	75.9%	82.7%	75.4%	66.0%	88.9%	81.0%	76.4%
n =	173	159	292	14	35	49	341
TOTAL	77.8%	83.5%	80.9%	76.5%	88.9%	84.0%	81.2%
N 3	4,742	5,279	10,021	818	1,760	2,488	12,509

### **ENCOURAGING OBSERVATIONS:**

- •The belt use estimate <u>without</u> the inclusion of pickup trucks is only about 3 percentage points higher than the overall (81.2% compared to 78.3%).
- •Counties above 90% usage rate for all occupants are Harrison and Perry.
- •Female passengers in Hinds and Handcock showed usage rates in the mid-90 percent range which contrasts the other groupings for those counties.

- •Leflore County continues to have discouraging overall belt use estimates.
- •Rankin County's 66.7% belt use rate for all passengers is substandard.
- •Male passenger belt use rates in Chickasaw, Holmes, Leflore and Rankin were all below 63%.
- •Males in Chickasaw and Holmes are much different than the corresponding female population in using belts.

### TABLE 7: SEAT BELT USAGE RATES BY COUNTY - PASSENGER CARS

### FULL SURVEY OF 173 SITES IN 16 COUNTIES PASSENGER CARS BY DRIVER/PASSENGER AND GENDER (N 37,382)

COLINITY	DRIVERS			РА	SSENGE	RS	OCCUPANTS
COUNTY	Male	Female	All	Male	Female	All	All
DeSoto	85.6%	91.8%	88.3%	88.1%	85.4%	84.9%	88.1%
n =	498	418	996	67	153	220	1136
Harrison	92.0%	91.5%	91.8%	99.6%	95.9%	96.3%	92.6%
n =	290	364	580	57	107	164	818
Hinds	67.9%	82.5%	75.5%	77.9%	94.8%	87.7%	76.3%
n =	218	306	436	36	44	80	604
Jackson	80.1%	91.6%	86.6%	76.6%	94.1%	89.9%	87.0%
n =	244	277	488	38	110	148	669
Rankin	70.7%	82.7%	77.8%	44.4%	67.2%	57.7%	75.0%
n =	187	221	374	33	51	84	492
Chickasaw	65.5%	73.3%	70.6%	42.2%	71.2%	72.8%	70.9%
n =	122	148	244	16	36	52	322
Hancock	94.9%	90.2%	92.9%	72.6%	93.9%	79.0%	92.3%
n =	149	110	298	23	36	59	318
Holmes	67.5%	90.3%	81.7%	77.1%	80.4%	73.8%	81.0%
n =	168	109	336	32	49	81	358
Lee	74.2%	75.2%	72.4%	62.4%	79.7%	71.8%	72.4%
n =	149	191	298	19	38	57	397
Leflore	60.7%	72.6%	68.5%	65.3%	90.4%	77.8%	68.4%
n =	76	136	152	10	12	22	234
Madison	93.3%	87.9%	91.3%	92.9%	96.0%	94.9%	92.6%
n =	134	179	268	19	54	73	386
Panola	81.0%	76.2%	79.3%	80.9%	90.9%	88.2%	80.7%
n =	243	236	486	42	101	143	622
Perry	90.0%	89.4%	91.0%	100.0%	97.6%	97.6%	91.5%
n =	70	111	140	5	33	38	219
Pike	77.7%	88.2%	84.7%	89.9%	93.8%	91.5%	85.6%
n =	125	167	250	16	53	69	361
Pontotoc	75.6%	77.5%	77.5%	76.5%	80.9%	82.6%	77.8%
n =	98	126	196	10	21	31	255
Prentiss	72.0%	81.7%	78.0%	66.9%	78.4%	75.3%	78.3%
n =	68	100	136	6	17	23	191
TOTAL	77.8%	83.8%	81.5%	76.1%	87.3%	82.9%	81.7%
N 3	2,839	3,199	5,678	429	915	1,344	7,382

# ENCOURAGING OBSERVATIONS:

•With 7,382 observations, overall belt use in passenger cars is 81.7%. Harrison, Hancock, Madison and Perry counties claim the top spots in the passenger car category with over 90% belt use estimates. •DeSoto, Jackson and Pike counties also showed very high passenger car belt use rates above 85%. •Male and female passengers occupants in Harrison and Perry have extremely high belt use rates.

- •Leflore County is the only county to record an overall belt use rate below 70% in this passenger car category.
- •Lee and Chickasaw were just above the 70% usage mark.
- •Passenger occupants, especially males, in Rankin County were buckled below 60% of the time.

### TABLE 8: SEAT BELT USAGE RATES BY COUNTY - PICKUP TRUCKS

### FULL SURVEY OF 173 SITES IN 16 COUNTIES PICKUP TRUCKS BY DRIVER/PASSENGER AND GENDER (N 34,686)

C		DRIVER	s	PA	SSENGE	RS	OCCUPANTS
COUNTY	Male	Female	All	Male	Female	All	All
DeSoto	80.7%	89.7%	81.4%	61.8%	87.2%	75.1%	79.8%
n =	436	42	478	66	37	103	581
Harrison	84.0%	95.6%	84.9%	87.0%	95.7%	89.4%	85.6%
n =	357	50	407	68	39	107	514
Hinds	57.7%	86.1%	59.8%	55.0%	93.3%	61.0%	60.1%
n =	226	24	250	38	16	54	304
Jackson	73.8%	80.3%	74.8%	68.6%	84.5%	75.7%	76.3%
n =	320	43	363	39	66	105	468
Rankin	73.4%	84.9%	74.6%	96.8%	93.9%	94.5%	76.7%
n =	194	17	211	15	31	46	257
Chickasaw	55.9%	35.9%	55.3%	39.0%	49.8%	46.6%	55.6%
n =	203	11	214	26	16	42	256
Hancock	84.1%	83.9%	85.1%	88.0%	93.4%	93.2%	86.3%
n =	135	32	167	18	24	42	209
Holmes	69.2%	82.0%	69.6%	65.1%	87.6%	71.4%	69.8%
n =	187	5	192	28	12	40	232
Lee	65.5%	84.5%	66.4%	70.2%	66.7%	70.8%	66.7%
n =	228	14	242	31	20	51	293
Leflore	64.4%	58.2%	64.3%	75.1%	87.6%	70.6%	63.8%
n =	172	13	185	18	5	23	208
Madison	78.2%	81.6%	75.4%	91.3%	94.4%	89.6%	76.4%
n =	149	10	159	19	17	36	195
Panola	73.1%	78.1%	73.7%	64.9%	72.5%	70.0%	72.6%
n =	279	25	304	52	37	89	393
Perry	78.3%	84.7%	78.4%	79.1%	79.5%	73.5%	78.2%
n =	152	16	168	20	15	35	203
Pike	80.8%	94.9%	81.6%	80.9%	93.3%	86.7%	81.3%
n =	168	24	192	17	17	34	226
Pontotoc	66.4%	88.4%	66.7%	61.9%	70.7%	58.2%	66.0%
n =	172	16	188	25	12	37	225
Prentiss	59.2%	84.7%	59.1%	57.3%	100.0%	68.5%	58.2%
n =	95	4	99	15	8	23	122
TOTAL	71.1%	81.0%	71.5%	71.2%	84.7%	74.4%	71.7%
ΝЗ	3,473	346	3,819	495	372	867	4,686

# ENCOURAGING OBSERV ATION:

• Harrison and Hancock Counties display the two highest pickup belt use rates for all occupants at 85.6% and 86.3% respectively. • Truck passengers in Rankin

• Truck passengers in Rankin and Hancock displayed belt usages higher than 90%.

- •With 4,686 observations, overall belt use in pickup trucks is 71.7%.
- •Seven of the sixteen surveyed counties are below 70% belt usage and two of those counties (Chickasaw and Prentiss) are below 60%
- •Rankin County has a large discrepancy between drivers and passengers in pickup trucks.

### TABLE 9: SEAT BELT USAGE RATES BY COUNTY - SUVS

FULL SURVEY OF 173 SITES IN 16 COUNTIES SUVS BY DRIVER/PASSENGER AND GENDER (N 33,974)

COLINETY		DRIVERS		Passengers			OCCUPANTS
COUNTY	Male	Female	All	Male	Female	All	All
DeSoto	92.9%	92.3%	92.0%	77.8%	95.0%	88.5%	91.5%
n =	188	209	397	30	73	103	500
Harrison	90.7%	92.0%	91.6%	79.1%	96.3%	91.7%	91.6%
n =	182	194	376	41	75	116	492
Hinds	84.9%	61.3%	78.6%	84.2%	85.4%	85.9%	79.1%
n =	85	110	195	16	23	39	234
Jackson	84.9%	92.6%	89.2%	85.5%	98.4%	93.5%	90.5%
n =	143	138	281	31	78	109	390
Rankin	85.8%	91.2%	87.8%	95.0%	96.8%	94.3%	89.9%
n =	87	142	229	34	48	82	311
Chickasaw	62.5%	73.3%	71.6%	87.3%	95.8%	93.6%	73.6%
n =	53	72	125	8	16	24	149
Hancock	90.7%	63.5%	75.6%	68.1%	100.0%	70.4%	76.3%
n =	61	58	119	17	19	36	155
Holmes	69.2%	84.8%	73.6%	59.3%	81.8%	63.7%	72.2%
n =	63	52	115	10	26	36	151
Lee	72.9%	78.6%	67.7%	80.1%	75.7%	80.6%	68.6%
n =	69	99	168	11	23	34	202
Leflore	68.1%	75.9%	70.9%	63.8%	100.0%	87.1%	72.5%
n =	41	118	159	4	6	10	169
Madison	82.7%	78.1%	75.7%	100.0%	93.5%	93.5%	77.3%
n =	87	100	187	15	34	49	236
Panola	82.1%	79.2%	79.4%	75.0%	82.5%	79.0%	80.2%
n =	142	156	298	26	70	96	394
Perry	95.8%	89.5%	93.4%	100.0%	98.8%	99.1%	94.3%
n =	63	56	119	10	32	42	161
Pike	86.5%	94.0%	90.8%	100.0%	95.4%	96.6%	91.4%
n =	52	103	155	11	23	34	189
Pontotoc	78.4%	86.0%	83.0%	83.9%	92.1%	90.9%	83.9%
n =	48	64	112	11	15	26	138
Prentiss	64.3%	87.0%	78.9%	64.2%	100.0%	88.7%	79.8%
n =	36	51	87	5	11	16	103
TOTAL	80.7%	81.6%	81.0%	81.5%	92.7%	87.2%	81.8%
N 3	1,400	1,722	3,122	280	572	852	3,974

# ENCOURAGING OBSERVATIONS:

SUVs is 81.8% with 3,974 observations
•Five of the sixteen counties have overall belt use rates for SUVs over 90%.

•Overall belt use for

- •Almost all of the passengers observed in Perry and Pike were belted.
- •Female passengers have the highest belt usage rate in SUVs at 92.7%.

- •Lee County has the lowest overall belt use rate in SUV's at 68.6% and is the only county below 70%.
- •Chickasaw, Holmes and Leflore are just above a 70% usage rate.

### TABLE 10: SEAT BELT USAGE RATES BY COUNTY - VANS

### FULL SURVEY OF 173 SITES IN 16 COUNTIES VANS BY DRIVER/PASSENGER AND GENDER (N 31,153)

COLINITY		DRIVERS	5	PA	SSENGE	:RS	OCCUPANTS
COUNTY	Male	Female	All	Male	Female	All	All
DeSoto	85.8%	99.4%	88.0%	91.1%	94.3%	86.7%	87.3%
n =	94	54	148	16	30	46	194
Harrison	89.7%	88.2%	86.7%	100.0%	97.2%	97.8%	88.1%
n =	43	42	85	10	18	28	113
Hinds	79.5%	90.9%	84.6%	94.4%	100.0%	97.3%	86.7%
n =	50	21	71	10	10	20	91
Jackson	91.0%	94.9%	94.7%	76.6%	88.0%	79.2%	90.4%
n =	38	26	64	10	11	21	85
Rankin	91.8%	100.0%	94.6%	93.0%	93.6%	94.8%	94.3%
n =	33	30	63	10	7	17	80
Chickasaw	54.4%	68.5%	73.8%	51.7%	91.5%	88.2%	73.7%
n =	24	21	45	4	10	14	59
Hancock	37.7%	100.0%	86.0%	100.0%	91.6%	95.6%	87.3%
n =	18	16	34	5	11	16	50
Holmes	76.6%	92.5%	79.7%	91.7%	100.0%	98.0%	80.6%
n =	28	18	46	7	15	22	68
Lee	66.3%	98.1%	77.4%	100.0%	100.0%	100.0%	80.0%
n =	22	18	40	6	3	9	49
Leflore	52.0%	92.3%	68.7%	0.0%	0.0%	0.0%	66.1%
n =	11	9	20	0	1	1	21
Madison	98.0%	94.4%	97.2%	50.0%	88.6%	85.6%	94.2%
n =	17	18	35	6	12	18	53
Panola	76.3%	56.5%	73.1%	96.6%	84.8%	89.0%	77.1%
n =	41	31	72	12	26	38	110
Perry	76.9%	93.9%	86.4%	100.0%	100.0%	100.0%	88.4%
n =	7	9	16	2	6	8	24
Pike	87.4%	100.0%	93.3%	100.0%	87.5%	83.8%	91.1%
n =	21	18	39	3	10	13	52
Pontotoc	92.4%	90.4%	91.4%	67.2%	100.0%	86.4%	90.4%
n =	27	19	46	5	6	11	57
Prentiss	93.8%	88.6%	92.8%	78.5%	100.0%	94.3%	91.7%
n =	29	8	37	3	7	10	47
TOTAL	77.9%	90.3%	85.3%	86.5%	88.9%	86.6%	85.4%
N 3	503	358	861	109	183	292	1,153

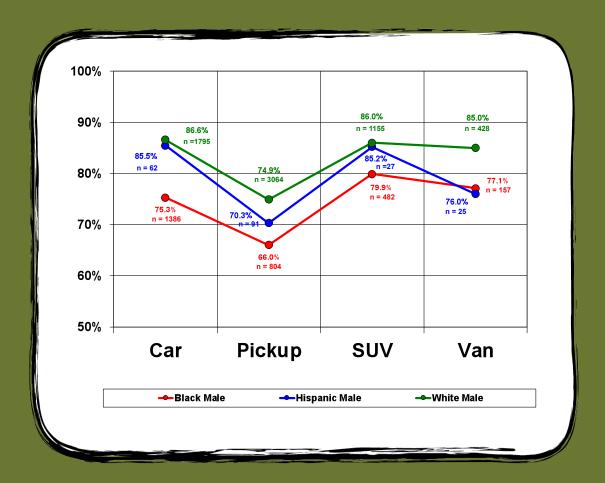
# ENCOURAGING OBSERVATIONS:

- •Overall belt use for vans is 85.4% with 1,153 observations.
- •Although many percentages in this breakdown are based on less than 30 observations and determined not to be representative, the overall usage rate for van occupants is over 90% for six of the sixteen counties.
- •Over 90% of females drivers in vans were buckled.
- •Usage rates over the 80% mark dominate the matrix.

# ROOM FOR IMPROVEMENT:

•Based on 59 observations, Chickasaw County shows the worst van belt use rate at 73.7% ( Note: Leflore showed 66.1% usage but based on only 21 observations).

# FIGURE 3A: MALE SEAT BELT USAGE RATES BY VEHICLE TYPE & RACE FULL SURVEY OF 173 SITES IN 16 COUNTIES



# CAR 475.3%

The first column in both graphs shows passenger car occupants buckling up from 75.3% of the time (black males) to 89% (white females).

# PICKUP

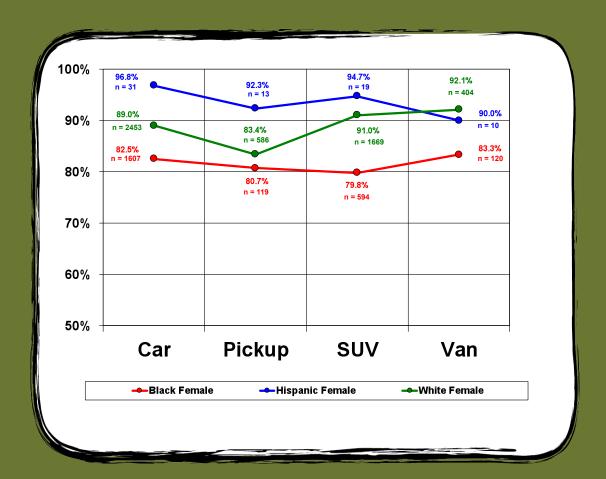


The second column in each graph shows the lowest value in these breakdowns. Black males in pickups buckle at a rate of only 66.0%.

Figure 3A and Figure 3B are graphic illustrations of how well the observed population buckled up by gender, race, and type of vehicle. Figure 3A shows males, and Figure 3B shows females. The similarities across vehicle categories are remarkable. Even with smaller sample sizes, the belt use estimates of Hispanic males and females follow the pattern of the remaining population. The dip for pickup truck occupants is far more pronounced for males than for females. Also noteworthy and unlike previous years, the female lines across vehicle types is relatively flat, which is perhaps a testament to females regarding safety belt usage more important this year than in the past.

Another distinguishable and positive observance is the gap between black occupants and white occupants in each vehicle category. In prior years of this survey, the estimated seat belt use among the black population lagged almost 10 percentage

# FIGURE 3B: FEMALE SEAT BELT USAGE RATES BY VEHICLE TYPE & RACE FULL SURVEY OF 173 SITES IN 16 COUNTIES



SUV 479.8%

The third column illustrates SUV belt use range from 79.8% (black females) to 91.0% (white females). The Hispanic figures are not representative of that motoring population.

VAN 92.1%

White females in vans have the highest rate of belt use behavior in the state with 92.1% of the 404 observed buckling up!

points behind whites. That gap has narrowed considerably in most of the cases in Figures 3A and 3B. The trend toward convergence is possibly an encouraging sign that education and outlook on vehicle safety is slowly becoming universal.

Also, as has been the case for many years, a comparison between graphs shows females using vehicle restraints far better than males. In general, perhaps the conclusion can be drawn that females are more likely to be using a seat belt restraint in Mississippi due to their belief in compliance with the primary seat belt law or their attitude towards vehicle occupant safety. Both of which should be ideologies that transfer across gender.

# BUCKLE UP MISSISSIPPI

It's the law!



# FIGURE 4: SEAT BELT USAGE RATES BY RACE & GENDER FULL SURVEY OF 173 SITES IN 16 COUNTIES

Figure 4 presents an analysis of belt use broken down only by race and gender. This chart reveals that, when it comes to buckling up, males within the black and white race categories lag about 8 percentage points behind females in the same category. Likewise, Hispanic females, despite the small sample size, dwarf their male counterparts in seat belt usage, with almost a 17 percentage point difference between the two. Hispanic females also top the list with 94.5% using seat belts. White females were a few percentage points behind at 89.2% usage. White males and black females buckle at almost the same rate around the 80% mark. Black males and Hispanic males round out the list with belt usage rates of 73.6% and 77.6% respectively.

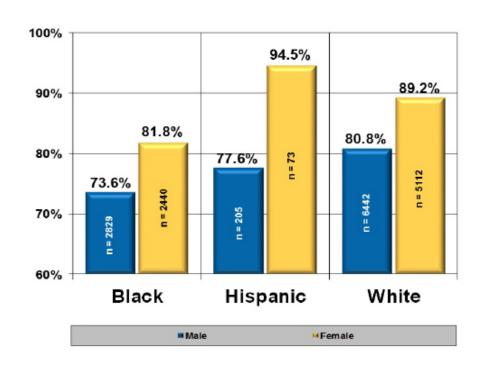


FIGURE 5: MISSISSIPPI SEAT BELT USAGE RATES
WITH 95% CONFIDENCE INTERVAL UPPER AND LOWER LIMITS (1997 – 2014)

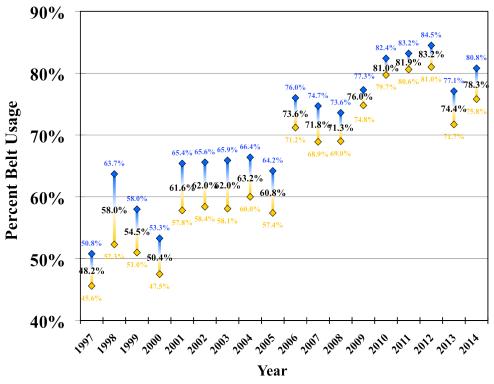
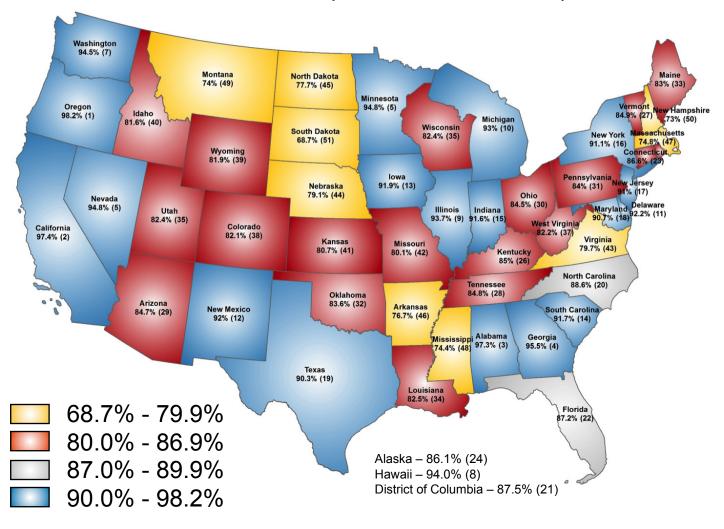


Figure 5 shows a definite upward trend of seat belt usage rates since 1997. Each year displays an official belt use rate and 95% confidence interval upper and lower limits. Since the primary seat belt law went into effect in 2006, the trend stayed relatively flat for about 3 years as can be seen by the overlapping of confidence intervals from 2006 to 2009. The rate took a significant positive jump in 2010 to 81.0% and small positive incremental increases of less than 1 percent the next couple of years. In 2013, the introduction of a new set of sampling criteria may have contributed to a significant decrease in the belt use estimation for the state. The statewide seat belt usage estimate fell from 83.2% to 74.4% from 2012 to 2013 and the confidence intervals do not overlap. Lastly, the 2014 statewide use estimate shows an increase of almost 4 percentage points back to 78.3%. The 2014 confidence interval overlaps that of 2013, and almost reaches the bottom limit of the 2012 interval.

FIGURE 6: NATIONAL SEAT BELT USAGE RATES & RANKS BY STATE 2013 NATIONAL AVERAGE: 87.0%

Source: 2013 NHTSA Traffic Safety Facts: Crash/Stats DOT HS 812030 - May 2014



The map of the United States in Figure 6 has been included to offer a geographic perspective of Mississippi's peer states with regard to belt use rates in 2013. Mississippi was in the second tier (red states) in 2012, but the aforementioned change in sampling criteria for 2013 and beyond has resulted in the state falling back down to the first tier (gold states) below the 80% usage mark. All states colored in gold or red had seat belt usage rates below the 2013 national average of 87%. States in the light gray or blue categories had belt use rates above the national average. The highest belt use states in the nation (above 90%) are the blue colored states, with Oregon taking the top spot at 98.2% estimated belt use. A ranking of the states in terms of belt use has also been included on the map in parentheses after their respective belt use rates (e.g. Mississippi ranked 48th in the nation in belt use in 2013).

# SECTION THREE: BEFORE AND AFTER

# **BELT USE** INTERVENTION

Since 2012, seat belt observational surveys have been conducted based on a new sampling criteria set forth by NHTSA. In Table 11 below, the follow-up or post-CIOT survey in 2013 is compared to the followup survey of 2014. Also, the mini survey of 2014, which is performed before CIOT in selected counties, is compared to the 2014 follow-up survey results. As stated previously, the mini survey uses observations from 54 sites in 8 counties and each follow-up includes 173 sites from 16 counties.

TABLE 11: BASELINE VERSUS FOLLOW-UP COUNTY COMPARISONS SEAT BELT USAGE RATES BY COUNTY \* MINI 2014 RESULTS ARE UNWEIGHTED

	PE	D				
COUNTY	2013 FOLLOW- UP	2014 MINI* 2014 FOLLOW-UP		PERCENT CHANGE	PERCENT CHANGE	
	А	В	С	А то С	ВтоС	
Chickasaw	68.6%	-	68.4%	-0.2%	-	
DeSoto	57.2%	90.8%	86.5%	29.3%	-4.3%	
Hancock	79.7%	-	83.2%	3.5%	-	
Harrison	93.0%	97.8%	90.3%	-2.7%	-7.5%	
Holmes	71.7%	-	74.5%	2.8%	-	
Hinds	76.7%	-	71.9%	-4.8%	-	
Jackson	95.7%	-	85.2%	-10.5%	-	
Lee	71.7%	72.7%	70.3%	-1.4%	-2.4%	
Leflore	60.3%	60.9%	67.4%	7.1%	6.5%	
Madison	81.1%	85.8%	86.0%	4.9%	0.2%	
Panola	54.3%	-	77.9%	23.6%	-	
Perry	85.3%	85.4%	85.2%	-0.1%	-0.2%	
Pike	84.0%	83.0%	84.0%	0.0%	1.0%	
Pontotoc	70.8%	-	75.5%	4.7%	-	
Prentiss	60.2%	-	71.7%	11.5%	-	
Rankin	75.0%	78.7%	78.7%	3.7%	0.0%	
TOTAL	74.4%	83.2%	78.3%	3.9%	-4.9%	

In 2013, the first post-CIOT survey conducted under the new criteria produced an overall estimate of 74.4% seat belt usage by the motoring public. This result was almost 9 percentage points lower than the belt use estimate Mississippi had determined the year before (83.2% in 2012). Nevertheless, the results for 2013 were verified and determined to be accurate. Mississippi had just gotten a new "yardstick" that was to be used for the foreseeable future.

In 2014, the same new survey design was used as the official statewide estimator of belt usage. As can be seen in Table 11, the overall result of the 2014 statewide survey was almost 4 percentage points higher than the year before (74.4% in 2013 to 78.3% in 2014). In comparing the follow-ups surveys from 2013 (A) to 2014 (C), major positive differences can be seen in DeSoto (+29.3%), Panola (+23.6%), and Prentiss (+11.5%) counties, presumably due to an increased effort in media and enforcement in these areas of the state. The only significant drop in belt use from 2013 to 2014 came, surprisingly, from one of the coastal counties surveyed. Jackson County returned a 10.5% drop in estimated belt usage from 2013 to 2014. The coastal counties have consistently been above the 90% mark for several years before 2014. All other differences among the counties surveyed were less than 5% in either a positive or negative direction. These differences are considered to be due to normal fluctuations and of minimal impact.

Comparing the mini 2014 (B) to the follow-up 2014 (C) is intended to gauge the impact of the CIOT campaign from before implementation to after the completion of media and enforcement activities. However, since the mini survey is a subsample of 54 sites, the comparison is not exactly equitable. The percent change between belt use estimations show many insignificant increases or decreases over the campaign period. The comparison of the overall belt use estimates shows a decrease of around 5% in estimated belt usage from pre-CIOT to post-CIOT. Of the 8 counties compared, there were two outliers. Harrison County, which is another coastal county and usually above the 90% belt use mark, exhibited a 7.5% drop in estimated belt use from the mini (97.8%) to the follow-up (90.3%). Harrison remains the best county example of belt use practices in the state however. On the other end of the spectrum is the second outlier and one of the most troublesome counties in terms of belt use – Leflore County. Leflore showed a 6.5+% increase in belt use from both the mini as well as the 2013 follow-up. Although Leflore is not notable for the prevalent use of seat belts, the increase in observed belt use the county experienced is notable and most likely a testament to the work being done there to help save lives.

TABLE 12: ROAD CLASS COMPARISONS

SEAT BELT USAGE RATES BY ROAD CLASS \* MINI 2014 RESULTS ARE UNWEIGHTED

	PEI	PERCENT	PERCENT		
VEHICLE	2013 FOLLOW-UP	2014 MINI*	2014 FOLLOW-UP	CHANGE	CHANGE
	А	В	С	АтоС	ВтоС
Interstates & Other Expressways	85.3%	85.5%	85.9%	0.6%	0.4%
Other Principal Arterials	81.8%	86.0%	85.2%	3.4%	-0.8%
Minor Arterials	76.8%	80.6%	80.6%	3.8%	0.0%
Collectors	71.5%	79.5%	74.8%	3.3%	-4.7%
Local Roads	67.6%	79.8%	69.5%	1.9%	-10.3%

Comparing before and after belt usage rates by road classification is presented in Table 12. All of the rate differences from the 2013 Follow-up (A) to the 2014 Follow-up (C) are positive, which is a very good indicator that seat belt awareness campaigns and enforcement has had positive impact on behavioral change. The largest change was a 3.8% increase in belt usage observed on minor arterial roads. When comparing the 2014 Mini (B) to the 2014 Follow-up, the changes in the top three road classes did not change enough to mention. However, the rates for collectors and local roads dropped considerably from pre-CIOT to post-CIOT. Collector roads showed a 4.7% drop, while local roads experienced a 10.3% drop in belt use.

TABLE 13: VEHICLE TYPE COMPARISONS

SEAT BELT USAGE RATES BY VEHICLE TYPE \* MINI 2014 RESULTS ARE UNWEIGHTED

	PER	DEDOENT	DEDOENT			
VEHICLE	2013 FOLLOW- UP	2014 MINI*	2014 FOLLOW-UP	PERCENT CHANGE	CHANGE	
	А	В	С	АтоС	ВтоС	
Car/Wagon	76.4%	85.7%	81.7%	5.3%	-4.0%	
Pickup	68.3%	75.0%	71.7%	3.4%	-3.3%	
SUV	80.2%	88.1%	81.8%	1.6%	-6.3%	
Van	80.1%	84.2%	85.4%	5.3%	1.2%	

Table 13 illustrates, from the 2013 Follow-up (A) to the 2014 Follow-up (C), the belt use rates for passenger cars and vans increased over 5 percentage points. The increases in observed belt use for these two vehicle types definitely have the most impact on the overall belt use boost in 2014. Likewise, the other two vehicle types showed positive increases (comparing A to C), and much to the delight of the state, pickup truck observed belt use moved across the 70% mark. Comparison of the 2014 Mini (B) to the 2014 Follow-up (C) paints a much different picture than comparing the follow-ups, but these negative differences can most likely be attributed to the samples not being the same. Again, the mini is a subset of the statewide or follow-up survey, and the negative percent changes are not considered to reflect the impact of the CIOT campaign.

TABLE 14: BASELINE VERSUS FOLLOW-UP RACE/GENDER COMPARISONS
SEAT BELT USAGE RATES BY RACE AND GENDER
\* ALL RESULTS ARE UNWEIGHTED

	PEF	DEDGENIT			
COUNTY	2013 FOLLOW- UP	2014 MINI*	2014 FOLLOW-UP*	PERCENT CHANGE	PERCENT CHANGE
	А	В	С	АтоС	ВтоС
Black Female	74.6%	82.6%	81.8%	7.2%	-0.8%
Black Male	67.7%	72.6%	73.6%	5.9%	1.0%
Hispanic Female	90.5%	96.2%	94.5%	4.0%	-1.7%
Hispanic Male	80.8%	79.5%	77.6%	-3.2%	-1.9%
White Female	83.3%	90.0%	89.2%	5.9%	-0.8%
White Male	75.3%	81.5%	80.8%	5.5%	-0.7%

In Table 14 the comparison of belt use is across race and gender. One can see there is not much change when comparing the 2014 Mini (B) to the 2014 Follow-up (C). The percentages are almost identical. However, when contrasting the results of the 2013 Follow-up (A) to the 2014 Follow-up (C), significant increases can be seen in both genders of white and black motorists. Black females held the highest increase at 7.2% from 2013 to 2014. The other three major improvements were relative the same at about a 6% increase – black males (+5.9%), white females (+5.9%), and white males (5.5%). Hispanic occupants estimates cannot be considered accurate statewide due to the low sample sizes, but their numbers may continue to grow and should be considered as an integral part of any future seat belt campaign.

The 2013 Follow-up and 2014 Follow-up both use the full survey results from 173 sites in 16 counties. Comparing these full surveys to the 2014 Mini is not an equitable comparison. Therefore, in an effort to develop a meaningful evaluation, the 54 sites that comprise the 2014 Mini were filtered out of the two other surveys and another comparison was conducted. The results of this comparison by county surveyed can be seen in Table 15.

TABLE 15: COUNTY COMPARISONS OF 54 MINI SITES SEAT BELT USAGE RATES BY COUNTY

\* ALL RESULTS ARE UNWEIGHTED

	PER	PERCENT BELTED			PERCENT
COUNTY	2013 FOLLOW- UP	2014 MINI*	2014 FOLLOW-UP	PERCENT CHANGE	CHANGE
	Α	В	С	А то С	ВтоС
DeSoto	56.3%	90.8%	89.4%	33.1%	-1.4%
Harrison	91.6%	97.8%	90.9%	-0.7%	-6.9%
Lee	80.9%	72.7%	74.9%	-6.0%	2.2%
Leflore	64.2%	60.9%	71.1%	6.9%	10.2%
Madison	88.0%	85.8%	88.2%	0.2%	2.4%
Perry	87.4%	85.4%	87.2%	-0.2%	1.8%
Pike	84.7%	83.0%	84.0%	-0.7%	1.0%
Rankin	84.8%	78.7%	83.4%	-1.4%	4.7%
TOTAL	79.1%	83.2%	84.5%	5.4%	1.3%

DeSoto County experienced an extraordinary turnaround in belt usage from 2013 to 2014. What can only be explained as an anomaly in observed belt usage, DeSoto's 56.3% belt use estimate in 2013 returned to more expected values over 30 percentage points higher in 2014. Leflore County also exhibited superlative positive gains in belt use over the year (+6.9%) and over the 2014 CIOT campaign (+10.2%). This "mini sites only" comparison in Table 15 ultimately showed an overall rise in belt use of 5.4% from the 2013 Follow-up (A) to the 2014 Follow-up (C). The only significant declines in observed belt use in this comparison are Harrison County over the 2014 CIOT campaign (-6.9%) and Lee County from 2013 to 2014 (-6.0%). All other differences are considered normal fluctuations in observed belt use estimates.







### SECTION FOUR:

- \*\*United States Census Bureau and American Community Survey. (2009-2013). [Data Table]. Demographic and Housing Estimates. Retrieved from http://census.gov
- Mississippi Department of Transportation. (n.d.). Mississippi Public Roads Selected Statistics Extent, Travel, and Designation. Retrieved from http://mdot.ms.gov
- ▲ State of Mississippi Department of Revenue. (2012). Annual Report. Retrieved from http://www.dor.ms.gov/
- Mississippi Office of Highway Safety

# **SECTION FOUR:**

# **CHICKASAW**

### 68.4% BELT USAGE

\*\* Population Estimate: 17,403



3 9,110

FEMALES



3 8,293



FATALITIES •					
2012 Fatalities	2012 Belted Fatalities	2012 % Belted Fatalities	2012 Unbelted Fatalities	2012 % Unbelted Fatalities	
3	0	0%	3	100%	

### **DEMOGRAPHICS**

% White	55.5%
% Black	42.6%
% Other	2.0%
% Age 15-19	7.1%
% Age: 65+	14.8%
Road - Miles of Roadway 2011	726
▲ Vehicle - Number of Registered Vehicles 2013	16,423

### **ENFORCEMENT**

		2011 Seatbelt Citations	2012 Seatbelt Citations
МНР	388	238	171
County	11	8	17
Houston	1	1	2
Okalona	23	5	0

# **DESOTO**

### 86.5% BELT USAGE

\*\* Population Estimate: 163,975



3 84,255

\*FEMALES



3 79,720



# DEMOGRAPHICS

% White	72.8%
% Black	21.0%
% Other	6.2%
% Age 15-19	7.4%
% Age: 65+	10.6%
• Road - Miles of Roadway 2011	1,203
▲ Vehicle - Number of Registered Vehicles 2013	164,184

### FATALITIES •

2012 Fatalities	2012 Belted Fatalities	2012 % Belted Fatalities	2012 Unbelted Fatalities	2012 % Unbelted Fatalities
7	4	57%	3	43%

	2010 Seatbelt Citations	2011 Seatbelt Citations	2012 Seatbelt Citations
MHP	137	83	24
County	560	144	59
Hernando	168	94	85
Horn Lake	214	314	858
Olive Branch	525	833	471
Southhaven	116	112	26

# **COUNTY ASSESSMENTS**

### FATALITIES • 2012 % 2012 2012 2012 % Unbelted 2012 Belted Belted Unbelted **Fatalities** Fatalities 0% 100%

FATALITIES •

2012

Unbelted

**Fatalities** 

2012 %

Belted

**Fatalities** 

44%

**DEMOGRAPHICS** 

% White	87.8%
% Black	7.6%
% Other	4.6%
% Age 15-19	6.5%
% Age: 65+	15.9%
• Road - Miles of Roadway 2011	1,203
▲ Vehicle - Number of Registered Vehicles 2013	164,184

### **ENFORCEMENT**

	2010 Seatbelt Citations	2011 Seatbelt Citations	2012 Seatbelt Citations
MHP	23	11	135
County	33	13	72
Bay St. Louis	17	5	0
Waveland	55	8	3

# HANCOCK

83.2% BELT USAGE

\*\* Population Estimate: 44,597







# **HARRISON**

90.3% BELT USAGE

\*\* Population Estimate: 190,756





3 94,713

### **DEMOGRAPHICS**

2012

Belted

**Fatalities** 

2012

**Fatalities** 

% White	70.4%
% Black	22.7%
% Other	6.9%
% Age 15-19	6.9%
% Age: 65+	12.1%
• Road - Miles of Roadway 2011	1,644
▲ Vehicle - Number of Registered Vehicles 2013	180,117

### **ENFORCEMENT**

2012 %

**Unbelted Fatalities** 

56%

	2010 Seatbelt Citations	2011 Seatbelt Citations	2012 Seatbelt Citations
MHP	19	19	21
County	58	58	20
Biloxi	251	982	1409
D' Iberville	96	556	486
Gulfport	1347	1259	2109
Long Beach	4	2	2
Pass Christian	15	7	0



# **SECTION FOUR:**

# HINDS

### 71.9% BELT USAGE

\*\* Population Estimate: 246,300



3 130,768



з 115,532



# FATALITIES 2012 % 2012

2012 Fatalities	2012 Belted Fatalities	2012 % Belted Fatalities	2012 Unbelted Fatalities	2012 % Unbelted Fatalities
21	8	38%	13	62%

### **DEMOGRAPHICS**

% White	28.1%
% Black	69.7%
% Other	2.2%
% Age 15-19	8.0%
% Age: 65+	11.1%
• Road - Miles of Roadway 2011	2,337
▲ Vehicle - Number of Registered Vehicles 2013	193,114

### **ENFORCEMENT**

	2010 Seatbelt Citations	2011 Seatbelt Citations	2012 Seatbelt Citations
MHP	53	111	255
County	49	903	481
Bolton	2	2	1
Clinton	136	101	48
Learned	0	0	0
Raymond	12	65	41
Terry	5	2	0
Utica	3	2	0
Edwards	1	3	2
Jackson	1549	1112	1928

# HOLMES

### 74.5% BELT USAGE

\*\* Population Estimate: 18,931



310,008



3 8,932



### FATALITIES •

2012 Fatalities	2012 Belted Fatalities	2012 % Belted Fatalities	2012 Unbelted Fatalities	2012 % Unbelted Fatalities
7	2	29%	5	71%

### **DEMOGRAPHICS**

% White	15.8%
% Black	83.0%
% Other	1.1%
% Age 15-19	9.0%
% Age: 65+	13.1%
• Road - Miles of Roadway 2011	1,015
▲ Vehicle - Number of Registered Vehicles 2013	15,312

	2010 Seatbelt Citations	2011 Seatbelt Citations	2012 Seatbelt Citations
MHP	67	111	168
County	34	43	1
Cruger	0	0	0
Durant	27	5	19
Goodman	7	0	0
Lexington	35	98	78
Pickens	6	0	8
Tchula	0	0	0
West	4	2	2

# **COUNTY ASSESSMENTS**

### FATALITIES • 2012 2012 % 2012 2012 2012 % Belted Belted Unbelted Unbelted Fatalities **Fatalities** Fatalities Fatalities Fatalities 75% 25%

# **JACKSON**

85.2% BELT USAGE

\*\* Population Estimate: 139,906



3 70,986

FEMALES



3 68,920

# MALES

### **DEMOGRAPHICS**

% White	73.1%
% Black	21.8%
% Other	5.1%
% Age 15-19	6.8%
% Age: 65+	12.8%
• Road - Miles of Roadway 2011	1,450
▲ Vehicle - Number of Registered Vehicles 2013	132,883

### **ENFORCEMENT**

	2010 Seatbelt Citations	2011 Seatbelt Citations	2012 Seatbelt Citations
MHP	157	107	340
County	308	248	235
Escatawpa	0	1	1
Gautier	257	208	67
Moss Point	1	9	10
Ocean Springs	80	9	1
Pascagoula	1319	929	846

### FATALITIES •

2012 Fatalities	2012 Belted Fatalities	2012 % Belted Fatalities	2012 Unbelted Fatalities	2012 % Unbelted Fatalities
7	2	29%	5	71%

70.3% BELT USAGE

\*\* Population Estimate: 83,964



3 43,916

**FEMALES** 

3 40,048



### **DEMOGRAPHICS**

% White	69.7%
% Black	27.6%
% Other	2.7%
% Age 15-19	6.8%
% Age: 65+	13.3%
• Road - Miles of Roadway 2011	1,267
▲ Vehicle - Number of Registered Vehicles 2013	76,362

	2010 Seatbelt Citations	2011 Seatbelt Citations	2012 Seatbelt Citations
MHP	348	220	227
County	17	16	12
Baldwyn	29	23	33
Nettleton	11	3	4
Plantersville	12	35	6
Saltillo	122	141	62
Sherman	31	34	52
Shannon	18	0	0
Tupelo	532	329	106
Verona	10	6	21
Guntown	8	9	23



# **SECTION FOUR:**

# **LEFLORE**

### 67.4% BELT USAGE

\*\* Population Estimate: 31,993



3 16,710



з 15,283



		FATAL	ITIES '	•	
2012 Fatalities	2012 Belted Fatalities	2012 % Belted Fatalities	2012 Unbelted Fatalities	2012 % Unbelted Fatalities	
2	1	50%	1	50%	

### **DEMOGRAPHICS**

% White	25.7%
% Black	72.2%
% Other	2.1%
% Age 15-19	8.6%
% Age: 65+	11.9%
• Road - Miles of Roadway 2011	903
▲ Vehicle - Number of Registered Vehicles 2013	22,954

### **ENFORCEMENT**

	2010 Seatbelt Citations	2011 Seatbelt Citations	2012 Seatbelt Citations
MHP	277	73	26
County	177	35	25
Greenwood	1186	869	581
Itta Bena	21	13	14
Morgan City	0	0	0
Sidon	0	0	0
Schlater	1	0	0

# **MADISON**

### 86% BELT USAGE

\*\* Population Estimate: 97,151



3 50,530



3 46,621



### DEMOGRAPHICS

**Fatalities** 

Fatalities

% White	57.1%
% Black	38.3%
% Other	4.6%
% Age 15-19	7.1%
% Age: 65+	10.9%
• Road - Miles of Roadway 2011	1,311
▲ Vehicle - Number of Registered Vehicles 2013	97,566

# FATALITIES 2012 % 2012 Belted Unbelted Fatalities Fatalities Fatalities Unbelted Fatalities

	2010 Seatbelt Citations	2011 Seatbelt Citations	2012 Seatbelt Citations
MHP	170	82	4
County	562	452	10
Canton	35	108	128
Flora	6	4	3
Madison	157	159	118
Ridgeland	1263	1244	571

# **COUNTY ASSESSMENTS**

# FATALITIES 2012 Fatalities Belted Fatalities Fatalities

### **DEMOGRAPHICS**

% White	48.6%
% Black	50.7%
% Other	0.7%
% Age 15-19	7.2%
% Age: 65+	13.1%
• Road - Miles of Roadway 2011	1,193
▲ Vehicle - Number of Registered Vehicles 2013	30,790

### **ENFORCEMENT**

	2010 Seatbelt Citations	2011 Seatbelt Citations	2012 Seatbelt Citations
MHP	291	164	212
County	26	2	4
Batesville	26	49	18
Como	3	5	1
Courtland	43	1	0
Crenshaw	3	0	2
Crowder	0	0	0
Pope	1	0	0
Sardis	23	48	54

# PANOLA

77.9% BELT USAGE

\*\* Population Estimate: 34,558







### FATALITIES •

2012 Fatalities	2012 Belted Fatalities	2012 % Belted Fatalities	2012 Unbelted Fatalities	2012 % Unbelted Fatalities
4	1	25%	3	75%

### **DEMOGRAPHICS**

% White	77.6%
% Black	21.4%
% Other	1.1%
% Age 15-19	6.9%
% Age: 65+	15.0%
• Road - Miles of Roadway 2011	704
▲ Vehicle - Number of Registered Vehicles 2013	13,373

### **ENFORCEMENT**

	2010 Seatbelt Citations	2011 Seatbelt Citations	2012 Seatbelt Citations
MHP	13	7	8
County	6	5	5
Beaumont	2	1	0
New Augusta	11	9	1
Richton	2	0	2

## PERRY

85.2% BELT USAGE

**☀** Population Estimate: 12,174







# **SECTION FOUR:**

# PIKE

### 84% BELT USAGE

\*\* Population Estimate: 40,269



3 21,085



з 19,184



	FA	TALITIE	s•		
2012 Fatalities	2012 Belted Fatalities	2012 % Belted Fatalities	2012 Unbelted Fatalities	2012 % Unbelted Fatalities	
5	1	20%	4	80%	

### **DEMOGRAPHICS**

% White	46.3%
% Black	51.9%
% Other	1.8%
% Age 15-19	7.5%
% Age: 65+	14.4%
• Road - Miles of Roadway 2011	1,002
▲ Vehicle - Number of Registered Vehicles 2013	38,010

### **ENFORCEMENT**

	2010 Seatbelt Citations	2011 Seatbelt Citations	2012 Seatbelt Citations
MHP	245	175	151
County	111	97	188
Magnolia	1	0	0
McComb	384	282	371
Osyka	4	4	1
Summit	0	0	0

# PONTOTOC

### 75.5% BELT USAGE

\*\* Population Estimate: 30,207



3 15,298



3 14,909



### **DEMOGRAPHICS**

% White	79.3%
% Black	14.1%
% Other	6.6%
% Age 15-19	7.2%
% Age: 65+	13.2%
• Road - Miles of Roadway 2011	924
▲ Vehicle - Number of Registered Vehicles 2013	29,464

### FATALITIES •

2012 Fatalities	2012 Belted Fatalities	2012 % Belted Fatalities	2012 Unbelted Fatalities	2012 % Unbelted Fatalities
3	1	33%	2	67%

	2010 2011		2012
	Seatbelt	Seatbelt	Seatbelt
	Citations	Citations	Citations
МНР	10	0	1
County	3	0	4
Ecru	0	0	3
Pontotoc	53	31	133
Sherman	31	34	52

# **COUNTY ASSESSMENTS**

### FATALITIES • 2012 2012 % 2012 2012 2012 % Belted Belted Unbelted Unbelted Fatalities Fatalities Fatalities Fatalities Fatalities 17% 83%

### **DEMOGRAPHICS**

% White	84.3%
% Black	13.6%
% Other	2.2%
% Age 15-19	6.2%
% Age: 65+	12.0%
• Road - Miles of Roadway 2011	875
▲ Vehicle - Number of Registered Vehicles 2013	22,246

### **ENFORCEMENT**

	2010 2011 Seatbelt Seatbelt Citations Citations		2012 Seatbelt Citations
MHP	195	26	81
County	29	2	43
Baldwyn	29	23	33
Booneville	34	64	123
Jumperton	0	0	0
Marietta	0	0	156

# **PRENTISS**

71.7% BELT USAGE

\*\* Population Estimate: 25,354







### FATALITIES •

2012 Fatalities	2012 Belted Fatalities	2012 % Belted Fatalities	2012 Unbelted Fatalities	2012 % Unbelted Fatalities
21	5	24%	16	76%

### **DEMOGRAPHICS**

% White	77.7%
% Black	19.1%
% Other	3.2%
% Age 15-19	6.2%
% Age: 65+	12.0%
• Road - Miles of Roadway 2011	1,598
▲ Vehicle - Number of Registered Vehicles 2013	149,901

### **ENFORCEMENT**

	2010 Seatbelt Citations	2011 Seatbelt Citations	2012 Seatbelt Citations
MHP	31	6	1
County	78	41	4
Brandon	421	317	196
Florence	199	285	410
Flowood	97	268	97
Jackson	1549	1112	1928
Pearl	2338	1581	385
Pelahatchie	3	0	0
Richland	28	13	2
Puckett	44	76	40

# **RANKIN**

78.7% BELT USAGE

\*\* Population Estimate: 143,665







The final segment of this survey is motorcycle helmet use in Mississippi. Mississippi is fortunate to have an excellent motorcycle helmet law. It is a primary law. All motorcycle riders must wear helmets or receive a ticket. As a part of the post-campaign seat belt survey, motorcycle helmet use is also observed during the same time periods and at the same locations as vehicle occupants. There were 132 motorcycle riders observed in 2014, with 117 drivers and 15 passengers.

After some volatility in the nationwide estimated use of motorcycle helmets from 2009 to 2012, the helmet usage rate was determined to be constant for the past couple years. In 2009 the nationwide rate was 67%. In 2010, the rate plummeted to 54%. The rate jumped back up to 66% in 2011, and for the years 2012 and 2013, the helmet use rate has remained steady at 60%.<sup>6</sup>

Mississippi, however, has maintained a consistently high percentage of helmet use. Over the past several years, Mississippi's observed motorcycle helmet use has been in the upper 90% range. Once again, the overall observed helmet use for Mississippi in 2014 is 99.2%.



<sup>6</sup> NHTSA Traffic Safety Fact - Motorcycle Use in 2012 - Overall Results (DOT HS 811 759)

# MOTORCYCLE HELMET USE FOR MISSISSIPPI IN 2014 IS 99.2%

Table 16 provides a breakdown of 2014 helmet use in Mississippi by gender and race. White Males is the only categories that shows any noncompliance with the helmet law in 2014. Note there was no attempt in the survey to judge whether the helmet was legal or illegal.

TABLE 16: UNWEIGHTED MOTORCYCLE HELMET USAGE IN MISSISSIPPI FULL SURVEY OF 173 SITES IN 16 COUNTIES

MOTORCYCLE RIDERS	Number of Drivers	HELMETED DRIVERS	PERCENT HELMETED DRIVERS	NUMBER OF PASSENGERS	HELMETED PASSENGERS	PERCENT HELMETED PASSENGERS
Black Males	12	12	100.0%	0	0	-
Black Females	2	2	100.0%	0	0	-
White Males	99	98	99.0%	0	0	-
White Females	4	4	100.0%	15	15	100.0%
Hispanic Males	0	0	-	0	0	-
Hispanic Females	0	0	-	0	0	-
TOTAL	117	116	99.1%	15	15	100.0%

# DID YOU KNOW?





Motorcycle Helmet Use in the U.S. has remained constant the past couple of years.

99.2%

Overall observed helmet use in Mississippi for 2014

Passenger helmet use is 100%

Mississippi has maintained a consistently high percentage of helmet use.

# SUMMARY

For over a decade, intense media and enforcement campaigns have been directed towards Mississippians with the intent of increasing their awareness of seat belt laws, promoting highway safety, and changing the behavior of those who do not buckle their belts. The Click It or Ticket campaign is conducted over a four week period of earned media, paid media, and enforcement. This awareness and enforcement effort is part of the Memorial Day mobilization. The effectiveness of these efforts was evaluated by surveys managed by the Social Science Research Center at Mississippi State University.

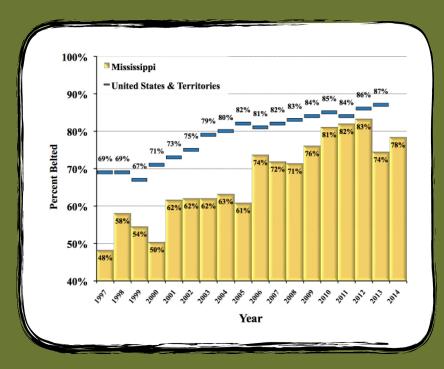
In 2014, the recently remodelled and NHTSA approved survey design was used to estimate belt use rates for Mississippi. The full survey, which includes 173 observation sites in 16 counties, was used to estimate the belt use rate of Mississippi motorists after the CIOT campaign in early June. The overall estimate from the full survey is considered the official belt use rate for Mississippi in 2014. Prior to CIOT, a subsample, or mini, survey was administered to establish a baseline belt use rate. The mini survey consisted of 54 sites in 8 counties. The baseline was conducted in April and early May.

Overall, the unweighted baseline information indicated an 83.2% estimated belt use rate in the spring, and when compared to the appropriately weighted 78.3% estimate for the post-campaign survey in the summer, Mississippi did not show a favorable change in belt use over the campaign period. However, the drop in observed belt usage from 2014's baseline to follow-up surveys is not considered a reflection of a failed CIOT campaign. Media and enforcement efforts in 2014 were considered very successful, although other measures of the program's success is not in the scope of this report. The 78.3% overall belt use estimate for the state in 2014 is up almost 4% from the previous year's 74.4% belt use rate. This positive change is a tribute to the success of the program. Although Mississippi's upward trend in belt use in recent years to over the 80% mark and approaching the national average has taken a significant step backwards, the latest step up brings encouragement to make the program even stronger in years to come. Mississippi's continued success in increasing belt usage facilitates the overarching goal of saving lives on our state's road network.

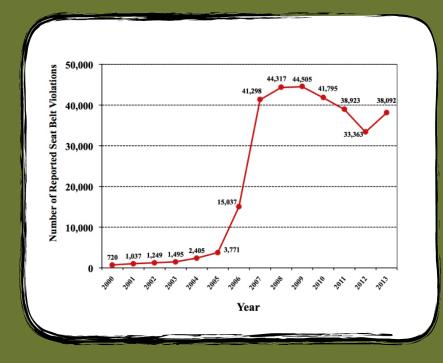
Finally, as is evident by the survey results, Mississippi has an excellent usage rate for motorcycle helmet usage. For a number of years, the helmet use rate has been near 100%.

# MISSISSIPPI SEAT BELT USAGE RATES & BELT VIOLATION CITATIONS

Two figures below illustrate belt use estimates and non-compliance citations written over the past several years. Trends in observed Mississippi belt use compared to the nation's average belt use per year can be seen in the top graph, while 14 years of Mississippi seat belt citation totals can be viewed in the bottom visual.



By comparing the national belt use estimates to Mississippi's observed usages over the past 18 years one can see the gap between the those two figures converging. The graph shows only about 1 out of every 2 Mississippi motorists buckling up in the late 1990's. From 2001 to 2005, a relatively flat belt use rate in the lower 60 percent range was exhibited by the state. It wasn't until 2006 when Mississippi enacted a primary seat belt law that provided the catalyst for over a 10 percentage point increase in observed seat belt use. This significant increase in belt use in 2006 was unfortunately counteracted by a major decrease in observed use in 2013, due primarily to new sampling criteria required by NHTSA. However, the most recent belt use estimate of 78% in 2014 represents the resiliency of Mississippi in the struggle to get belt use estimates back close to the national average. The national average for belt use in 2014 is not known at the time of this report.



The number of seat belt citations issued to the motoring public since 2000 has a similar trend to belt use, and a relationship between the two graphs can be seen. After the primary seat belt law was enacted the number of seat belt citations grew dramatically. From 2007 to 2010 the number of violations issued surpassed 40,000 citations per year. Following this peak of enforcement, a reduced number of citations issued in the following years correlate with a decrease in belt use in 2013, and an increase in citations written in 2013 is matched by an increase in observed belt use in 2014.





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